



ADA COUNTY BARBER PARK

4049 S Eckert Road
Boise, ID 83716
(208) 577-4575
www.adaweb.net

Case Study

Prepared by Selena O'Neal, CEM, LEED AP
Ada County Energy Specialist, Operations Department

Project Overview

Size:	5,817 sq ft
Type:	Office and Shop
Location:	Boise, Idaho
Utilities:	Idaho Power Intermountain Gas
Completion Date:	June 2005
LEED Certification:	LEED-NC v 2.1 Certified, Oct 2006
Green Features:	Natural daylighting with light shelves; Direct/Indirect pendant light fixtures with T-8 lamps; High-efficient evaporative cooling system; Green roof; Alternative transportation; Building commissioning; Construction waste management; Office waste recycling



The Boise River is a popular site for summer floating. Barber Park, the crown jewel of Ada County, is traditionally the starting point for over 100,000 river rafters each summer. The 69-acre park offers floaters everything from raft and tube rentals to shuttle service back to the park from the takeout point 3 miles downstream. Non-floaters and off-season visitors come to the park and enjoy picnic areas, bike trails, and natural areas. Wildlife can be observed throughout the park all year long. Depending on the season and time of day, visitors may observe many types of water fowl, deer, and even an occasional beaver or bald eagle.

In 2005, the Ada County Parks and Waterways Department undertook a major construction project to build a new administration building and raft rental facility in Barber Park. Planning began on the \$1.3 million project in November 2004 and was completed in June 2005. The project consisted of deconstructing an antiquated raft rental building and maintenance shop and constructing a new office space for the department's staff along with an adjoining raft rental facility for the public. The new energy-efficient buildings and easy access layout encourages conservation, while reducing wait times for customers.

Much planning went into the design and development of the building to minimize its impact on the natural environment. More than 90% of the construction materials were recycled. Wood salvaged from the

old building was donated to the animal shelter and used to help build food troughs for rescued horses.

Modeling performed by Boise's Integrated Design Lab helped determine the orientation of the building to maximize the use of natural daylight. Employee offices were strategically placed along the south side of the building to minimize the need for artificial light by the building's occupants. Light shelves were installed to reduce glare and also bring natural light deeper into the space than traditional windows allow.

The north side of the building was designed as a high bay garage-type raft rental shop. Large rollup doors on the north and west sides provide a natural free-flow of air during the hottest part of the season. Using an evaporative cooling system rather than a traditional rooftop air conditioner added to the building's energy efficiency. Operable windows enhance the cooling systems performance and provide natural ventilation during the spring and autumn months. Large overhangs shade much of the exterior walls on the eastern side of the building.

Ada County even went the extra step to incorporate items from the local utility's incentive program and earned credit for energy efficient features such as occupancy sensors, self-luminous exit signs, a "cool" roof, an evaporative AC system, and building commissioning. Ada County estimates a savings of 17,000 kWh per year for these features that were designed and built into the new facility.



The green roof is the “coolest” sustainable feature of the new facility. With grants from Idaho State Parks and the Idaho Department of Environmental Quality, Ada County was able to install a green roof using a GreenGrid™ self-contained tray system. The trays are made of 60% post industrial recycled material and the plants are 100% rapidly renewable, local products. A local nursery planted the trays which were then set in place by a local roofing company. The plants are hardy sedums with common names such as creeping stonecrop and mountain stonecrop. They are drought-tolerant and were chosen specifically for the hot, dry summers and cold winters common to the high desert of southern Idaho.

Some of the benefits of green roofs include: reduced heat island effect, extended roof life, increased roof insulation (which directly reduces the use of mechanical heating and cooling systems), natural habitat for wildlife, and stormwater management. To further serve as a demonstration project, an enclosed stairway was constructed to allow visitors to view the green roof up close. The park staff provides tours to schools and other groups as requested. The County also has plans for a new indoor/outdoor space with an interactive education center to be built in the next phase of park improvements.

The County incorporated other sustainable features into the facility such as the use of carpet tiles in the offices and conference rooms, rather than broadloom carpet. The County chose not to use floor coverings in much of the facility and instead, went with natural looking, low-maintenance sealed concrete. Ceilings were left “open” with exposed rafters and ductwork, and a natural textile product was used to provide sound attenuation. Cabinets made of natural wheatboard were used in conference rooms and break areas.



The new facility meets or exceeds the County's program requirements of affordable, sustainable construction. It is actually less expensive to operate while providing a healthier environment for the occupants. The project earned a LEED certification from US Green Building Council in October 2006.



PROJECT TEAM

Board of Ada County Commissioners:
 Rick Yzaguirre, Chairman
 Judy Peavey-Derr
 Fred Tilman

Design Team:
 McKibben + Cooper Architects
 Tikker Engineering
 Mulder Engineering
 Treasure Valley Engineers

Ada County Parks and Waterways:
 Pat Beale, Director
 Tom Harmon, Park Manager
 Carolyn Nitz, Office Technician

General Contractor:
 Ellsworth Kincaid
 Commissioning Agent:
 Heery International